DOCUMENT RESUME

ED 362 335 PS 021 855

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TITLE Retention of Second Graders' Knowledge and Skills One Year after a Brief Primary Sexual Abuse Prevention Program.
PUB DATE Apr 93
NOTE 22p.; Paper presented at the Annual Meeting of the American Educational Research Association (Atlanta, GA, April 12-16, 1993).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Child Abuse; Elementary School Students; Grade 2; *Prevention; Primary Education; *Program Effectiveness; *Retention (Psychology); *Sexual Abuse; *Young Children
IDENTIFIERS What If Situations Test

ABSTRACT

This study investigated the long-term cognitive effects for 40 second graders 1 year after participating in a brief, 50-minute, primary sexual abuse prevention program. It was expected that participants would retain knowledge of body safety and of sexual abuse prevention skills 1 year after the treatment program. The Personal Safety Questionnaire and the "What If" Situations Test were used to measure retention. Utilizing the pretest, posttest, and retention scores of both instruments, it was demonstrated that the second graders did retain knowledge of sexual abuse and sexual abuse prevention skills. The findings confirm the long-term effectiveness of a brief primary sexual abuse prevention program. Implications include the need for additional research demonstrating retention as well as developing evaluation instruments that are more age-appropriate. Contains 18 references. (Author/MDM)

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ED 362 335

RETENTION OF SECOND GRADERS' KNOWLEDGE AND SKILLS ONE YEAR AFTER A BRIEF PRIMARY SEXUAL ABUSE PREVENTION PROGRAM

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PS 021855

Paper presented at the annual meeting of the
American Educational Research Association
Atlanta, April 1993

Abstract

This study investigates the long-term cognitive effects for 40 second graders one year after participating in a brief (50 minute) primary sexual abuse prevention program. It was expected that participants would retain knowledge of body safety and of sexual abuse prevention skills one year after the treatment program. The Personal Safety Questionnaire and the "What If" Situations Test were used to measure retention. Utilizing the pretest, posttest, and retention scores of both instruments, it was demonstrated that second graders who participated in a sexual abuse prevention program retained knowledge of sexual abuse and sexual abuse prevention skills. The findings confirm the long-term effectiveness of a brief primary sexual abuse prevention program. Implications include the need for additional research demonstrating retention as well as developing evaluation instruments that are more age-appropriate.

RETENTION OF SECOND GRADERS' KNOWLEDGE AND SKILLS ONE YEAR AFTER A BRIEF PRIMARY SEXUAL ABUSE PREVENTION PROGRAM

Over the past decade, there has been a proliferation of programs focused on primary prevention of child sexual abuse. Many of these programs have developed as a result of increasing community awareness of children's vulnerability to this form of abuse. In addition, inclusion of primary prevention programs into school curricula has been mandated in numerous states.

Although the intent of sexual abuse prevention programs is to increase children's specific knowledge and skills, there has been limited research to support either the short- or long-term effectiveness of these programs. In the last ten years, approximately 35 empirical studies testing initial program effectiveness and 13 studies addressing issues of retention have been published. Findings of initial program effectiveness are predominately positive. The results of the retention studies are mixed.

Studies demonstrating retention of sexual abuse prevention knowledge and skills have been reported by Wurtele, Saslawsky, Miller, Marrs, and Britcher (1986) and Saslawsky and Wurtele (1986). In both studies, the trained children continued to maintain their sexual abuse prevention knowledge and skills three months after viewing a behavior skills training film. Similar

retention results were obtained by Ratto and Bogat (1990) in a study with pre-school children. Trained child were able to retain knowledge and skills three months after a treatment program.

Results indicating retention of sexual abuse prevention skills also have been shown by Fryer, Kraizer, and Miyoshi (1987) in a six month post-training situation simulating an attempted abduction. They found that one-half year later the trained children continued to be less likely to agree to leave the school building with a stranger. Similarly, retention was demonstrated in studies by Kolko, Moser, Litz, and Hughes (1987) and Kolko, Moser, and Hughes (1989). Six months after a training program, the trained children maintained their abuse prevention knowledge and skills.

In addition, Peraino (1990) has demonstrated abuse prevention knowledge by pre-schoolers in a 6.5 week retest. Finally, retention results were also positive when two other prevention programs were evaluated by Wurtele, Marrs, and Miller-Perrin (1987). Children trained in both programs retained sexual abuse knowledge and skills after a six-week period.

In contrast, some research has not supported retention or has produced inconsistent results. Plummer's (1984) follow-ups at two and eight months showed that learning had not been retained at significant levels. Retention results of Miltenberger and Thiesse-Duffy (1988) two month follow-up

measures were mixed with older children, but not younger children, retaining knowledge and skills. The practical significance of a three month follow-up measure completed by Poche, Brouwer, and Swearingen (1981) was questionable due to the small sample size of two subjects.

Retention results were inconsistent when two types of prevention programs were compared by Wurtele, Kast, Miller-Perrin, and Kondrick (1989). Children trained in one type of program retained sexual abuse prevention skills while those trained with another program did not maintain their learning. Wurtele (1990a) showed that although pre-schoolers retained knowledge at one-month retest, there was confusion about certain types of sexual abuse prevention knowledge and skills.

It is important to understand the effects of a brief intervention program for long-term retention since it may be several months or years after training before a child is confronted with a potential abuse situation. In 1991, Grendel completed a study indicating that first graders' sexual abuse prevention knowledge and skills significantly increased after participation in a brief primary sexual abuse prevention program. The purpose of the current study was to investigate the long-term retention of these first graders one year after participation in a body safety program. It was hypothesized that participants would retain primary prevention knowledge and skills at a significant level ($p < .05$) one year after the treatment program.

Method

Participants

Of the 51 students exposed to the treatment in Grendel's (1991) study, 40 were enrolled in the same two southwest Ohio suburban public schools one year later. All students had participated in a brief (50 minute) body safety training program 12 months prior to this study. The participants were on average 7.9 years old. Fifty-five percent were female, 45% were male, and 12.5% were African-American while 87.5% were white. Parental consent had been obtained prior to the initial study when participants were first graders. Participant permission was secured at the onset of each individual interview.

Procedure

Data were collected over a two day period by two interviewers. At the beginning of each day the classroom teachers reminded the students about the body safety program presented one year earlier. The teachers told the students that some of them would be having an individual meeting with a program representative. The purpose was to see how much the students remembered from the presentation in order to improve the body safety program.

The interviewers were introduced to the students in each class before beginning the interviews. The interviewer stated she would be meeting with each student for about 15-20 minutes in a small conference room. After the interviewer came to the

classroom and identified the next child with whom she would be meeting, she walked with the student to the conference room. On arriving at the conference room, the interviewer read the directions for the measurement tools as printed at the top of each form. Participants' verbatim answers were recorded on separate preprinted answer sheets.

Confidentiality of their answers was assured to all participants. The interviewer affirmed that it was alright to say "I don't know" if the participant did not know the answers to some of the questions. Participants were informed that they could stop the interview at any time should they not want to answer any further questions. Explicit participant assent was asked for prior to administering each instrument.

In preparation for data collection, the two interviewers completed a two-hour training session with the researcher of the original study to assure consistency of collection techniques and replication of methodology. The interviewers were trained in how to administer and score the instruments, how to build rapport with the students, and how to handle disclosures of sexual abuse.

Tape recordings of a random sample of eight interviews were used to assure inter-rater reliability. The interviewers transcribed the tape recorded interviews and compared answer sheets to confirm consistency of the responses for data analysis. Inter-rater reliability of .97 was established.

Instrumentation

The two dependent measures, the Personal Safety Questionnaire (PSQ) and the "What If" Situations Test (WIST), were administered individually in an interview format with responses recorded on the appropriate form. The WIST is designed to be administered in an individual interview format. Although the PSQ is typically administered in a group format, the decision was made to employ an interview format in order to assure replication of the procedures used in the previous study by Grendel (1991).

The PSQ and WIST were developed by Wurtele and her colleagues. Both measures have been utilized in several retention studies with participants ranging from 3 to 12 years of age (e.g., Ratto & Bogat, 1990; Saslawsky & Wurtele, 1986; Wurtele, 1990a; Wurtele et al., 1989, Wurtele et al., 1987; Wurtele et al., 1986).

The PSQ is a 15 item instrument which includes three control questions to check the participant's ability to respond to this format. The remaining 12 questions relate to personal safety and assess the participant's knowledge about personal body safety. All questions are answered either "yes", "no", or "I don't know". PSQ scores are based on the number of correct responses with a range of 0-12.

Wurtele and her colleagues have demonstrated adequate reliability and validity for the PSQ (Wurtele, Kast, Miller-Perrin, & Kondrick, 1989; Wurtele et al., 1986): internal

consistency is .74 and .78; one-month test-retest reliability is .53 ($p < .001$); one-week test-retest reliability is .64 ($p < .01$); and construct validity is .54 ($p < .01$). In this study, construct validity with the WIST Prevention Skills was .98 ($p < .01$).

The WIST is composed of six hypothetical situations or vignettes. Three situations portray appropriate touch requests, and three describe potential encounters with adults who make inappropriate touch requests to the participant. After each vignette is read by the interviewer, participants are asked a standard list of questions to determine if the touch request is appropriate or inappropriate; what they would say and do in the situation; who they would tell; and what they would report. The WIST is designed to assess the participant's ability to distinguish between appropriate and inappropriate touch requests by adults. It also measures the participant's ability to articulate specific prevention skills for use in inappropriate-touch request situations.

Three scores are obtained from the WIST, two Request Discrimination scores and a Prevention Skill rating. These scores rate the participant's ability to correctly recognize the three appropriate and three inappropriate touch requests. The Request Discrimination scores have a range of 0-3. The Prevention Skill score measures the participant's ability to verbalize the primary prevention skills one would use in the

inappropriate-touch request vignettes. This score has a range of 0-24.

The WIST was normed on 143 four- and five-year-olds in a Headstart preschool program. Like the PSQ, the WIST also has demonstrated reliability and validity (Wurtele et al., 1989; Wurtele, 1990b): one-month test-retest reliability for inappropriate-touch vignettes is .88 ($p < .001$). For the Prevention Skills scores, internal consistency is .84, one-month test-retest reliability is .76 ($p < .001$), and six-week test-retest reliability is .66 ($p < .001$). In this study, internal consistency (Cronbach's alpha) was .64. As previously stated, construct validity was correlated with the PSQ at .98 ($p < .01$).

Scoring of the WIST responses was completed by one researcher. In order to assure scoring consistency, responses from a random sample of six WIST tests were also scored by the researcher of the original study. Inter-rater reliability of .96 was demonstrated for WIST scoring.

Results

Changes in the PSQ scores, WIST Inappropriate and Appropriate Touch Request Discrimination scores, and WIST Prevention Skills scores each were analyzed using a one-way (within group) ANOVA. Using the SPSS (1988) repeated measures program, all assumptions for inferential testing were met. Table 1 presents the score means and standard deviations for the PSQ and the three WIST scores.

Insert Table 1 about here

Initial analyses showed significant effects over time were found for the PSQ, $F(2, 35) = 12.90$, $p = .00$; WIST Appropriate Request Discrimination, $F(2, 37) = 3.18$, $p = .05$; and WIST Prevention Skills, $F(2, 38) = 21.38$, $p = .00$. However, no significant effect was demonstrated for the WIST Inappropriate Touch Discrimination score. Further analysis using post hoc paired t-tests disclosed no significant changes between post-test and retention test scores for the PSQ, $t(36) = 1.46$, $p = .15$; Appropriate Request Discrimination, $t(39) = 1.91$, $p = .06$; WIST Prevention Skills, $t(39) = .37$, $p = .71$.

Changes in the four personal safety skills composing the WIST Prevention Skill score were analyzed using a one-way (within group) ANOVA with all assumptions for inferential testing being met. Means and standard deviations of the four personal safety skills are presented in Table 2.

Insert Table 2 about here

Preliminary analyses disclosed significant effects over time in participant scores for each personal safety skill. "What would you SAY?", $F(2, 38) = 3.55$, $p = .04$, measures the student's ability to refuse the request. "What would you DO?", $F(2, 38) =$

3.81, $p = .03$, assesses the subject's immediate removal of self from the situation. "Who would you TELL?", $F(2, 38) = 11.51$, $p = .00$, evaluates the student's identification of specific adults to notify. "What would you REPORT?", $F(2, 38) = 11.81$, $p = .00$, measures the subject's precise description of the attempted perpetrator and situation.

Subsequent analysis using post hoc paired t-tests disclosed no significant changes between post-test and retention test scores for the "What would you DO?" skill, $t(39) = .21$, $p = .83$; "Who would you TELL?" skill, $t(39) = .48$, $p = .64$; and "What would you REPORT?" skill, $t(39) = .51$, $p = .61$. However, there was a significant change in the "What would you SAY?" skill, $t(39) = 2.45$, $p = .02$.

Discussion

The purpose of this study was to investigate the long-term retention of knowledge and skills by second graders one year after participation in a body safety program. The results of this study demonstrate that second graders retain knowledge of personal body safety and sexual abuse prevention skills as long as one year following their participation in a brief sexual abuse prevention program.

As previously noted, F scores along with the means and standard deviations presented in Table 1 show that the second graders' knowledge and skills for the PSQ, WIST Appropriate Request Discrimination, and WIST Prevention Skills scores

increase from before the body safety program (pretest) to one year after the intervention program (retention). The *t*-test scores show that significant knowledge and skills are retained from immediately after the body safety program (posttest) to one year after the intervention (retention). However, there is no significant effect produced by the intervention on the WIST Inappropriate Request Discrimination score. In other words, there is no effect (either an increase or decrease) since 100% of the students scored perfect (3 of 3) responses over all three measurement periods (pretest, posttest, and retention).

The means and standard deviations presented in Table 2 along with the previously reported *F* scores demonstrate that all four personal safety skills of "What would you SAY, DO, TELL, and REPORT?" also increase from before the body safety program (pretest) to one year after the intervention program (retention). The *t*-test scores show that the safety skill of "What would you DO, TELL, and REPORT?" are retained from immediately after the body safety program (posttest) to one year after the intervention (retention). However, there is decrease in "What would you SAY?" skill one year after the intervention program.

This study supports the findings of the research by Saslawsky and Wurtele (1986), Wurtele et al. (1986), Wurtele et al. (1987), Fryer et al. (1987), Kolko et al. (1987), Kolko et al. (1989), Ratto and Bogat (1990), and Peraino (1990) that sexual abuse prevention knowledge and skills are retained. These

studies utilize various educational programs, a variety of testing measures, and a range of participant ages. However, they collectively show that children trained in personal body safety concepts and sexual abuse prevention skills maintain their learning over a range of retest periods from one month to one year.

The scope of this study is unique since it tests the retention of sexual abuse prevention knowledge and skills over the longest interval in the literature--one year). Several studies have as brief a follow-up period as one to two months while an almost equal number have focused on retesting at three to six months. Until this study, the research by Plummer (1984), at eight months post-treatment, was the longest retention evaluation.

The problem of a ceiling effect on the PSQ is evident in reexamining the study results. Table 1 shows that the PSQ pretest score was already high with a mean at about ten of a potential 12 correct responses. In fact, sixty percent of participants scored ten or more correct answers on the PSQ pretest. Problems with a ceiling effect on this instrument have been noted by Wurtele, her colleagues, and others (Wurtele et al., 1989).

Another issue produced by the study results is a problem of overgeneralizing personal body protection to appropriate touch requests. Responses to the WIST vignettes about appropriate

touch requests by health professionals showed that participants tend to overgeneralize this principle. In the two health care scenarios, 20-25% of participants responded that they would not allow the doctor/nurse to examine or treat them. Responding to a question on the PSQ, one-fourth of participants believed it was inappropriate for a doctor or nurse to touch a child's private parts even if the child was sick or hurt. The same type of over-generalization is also reported by Wurtele et al. (1989).

Possibilities for future research include expanding the frequency and time-frames of retention studies. Over the past six years, 13 follow-up studies have been published on the long-term effects of child sexual abuse prevention programs. A body of research evidence is accumulating about children's retention of sexual abuse prevention knowledge and skills. However, a greater number of one-year studies are necessary to confirm the findings of this study. The retention research eventually needs expansion of post-treatment studies at two and three years.

Another direction for future study is in research and development of additional instruments that are reliable, valid, and age-appropriate. The problem of ceiling effect on instruments and test-retest reliability requires an broader range of instruments that are sensitive and age-appropriate.

Educational evaluation, reassessment, and intervention are important means procedures for addressing overgeneralized personal safety protection to appropriate touch requests. Formal

and informal evaluation provides opportunities to identify, discuss, and correct children's misunderstandings or misconceptions.

The most important result of this study is it shows that children trained in a brief sexual abuse prevention program have retained the knowledge and skills they learned for at least one year. This result supports and is supported by other retention research. The positive effects of a brief intervention program makes it accessible and useful in a wide range of educational settings. The results confirm that these programs are an effective use of finite educational resources.

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Table 1

Means and Standard Deviations of Pretest, Posttest, and Retention Scores

Dependent Variable		Scores		
		Pre	Post	Retention
PSQ (range 0-12)	M	9.95	11.10	10.82
	SD	1.71	1.13	1.05
WIST Appropriate	M	2.51	2.72	2.42
Request (range 0-3)	SD	.85	.68	.84
WIST Inappropriate	M	3.00	3.00	3.00
Request (range 0-3)	SD	.00	.00	.00
WIST Prevention Skills	M	15.52	19.20	18.92
(range 0-24)	SD	5.47	4.02	3.85

Table 2

Means and Standard Deviations of WIST Prevention Skills for the Pretest, Posttest, and Retention Scores

Prevention Skill (range 0-6)		Scores		
		Pre	Post	Retention
What would you SAY?	M	4.75	5.07	4.50
	SD	1.69	1.53	1.68
What would you DO?	M	4.45	5.02	4.97
	SD	1.71	1.14	1.44
Who would you TELL?	M	3.67	5.02	5.17
	SD	2.27	1.54	1.65
What would you REPORT?	M	2.65	4.07	4.27
	SD	2.08	2.03	2.00